

REMARKS

Applicants acknowledge the Examiner's indication that claims 2, 12, 16, 27, and 31 are allowable if rewritten in proper form and to overcome certain rejections. Applicants amended claims 1, 2, 10, 12, 22, 23, and 27; canceled claims 36-41; and added new claims 42-52. Claims 1-35 and 42-52 are presented for examination.

Prior to this Reply, claims 1-41 were rejected under 35 U.S.C. § 112, first paragraph, for lack of enablement. Applicants traverse.

As explained by the Board of Appeals in Ex parte Forman, 230 U.S.P.Q. 546, 547 (1986), 35 U.S.C. §112, ¶1 requires Applicants to provide a sufficient disclosure

to enable one having ordinary skill in the relevant field to practice the invention claimed therein without the exercise of undue experimentation.

The Board went on to explain the factors that are considered in deciding when experimentation becomes "undue" (id.):

The determination of what constitutes undue experimentation in a given case requires the application of a standard of reasonableness, having due regard for the nature of the invention and the state of the art: *Ansul Co. v. Uniroyal, Inc.* [169 U.S.P.Q. 759, 762 (2d Cir. 1971)].

* * *

The factors to be considered have been summarized as the quantity of experimentation necessary, the amount of direction or guidance presented, the presence or absence of working examples, the nature of the invention, the state of the prior art, the relative skill of those in that art, the predictability or unpredictability of the art and the breadth of the claims. In *re Rainer*, 52 CCPA 1593, 347 F.2d 574, 146 USPQ 218 (1965); In *re Colianni*, *supra*.

Here, a person skilled in the art, reading Applicants' specification, would be able to practice the claimed invention – primary batteries including, among other things, a cathode having an oxide containing a metal and pentavalent bismuth -- without undue experimentation.

What is meant by "the nature of the invention" was discussed in the Ansul decision cited by the Board in Forman. In Ansul the Court explained that inventors who discover "a new use for existing composition" are entitled to broad, generic claims even if the inventors have not disclosed every potential embodiment of the invention (see 169 U.S.P.Q. at 762).

What this means in the context of the present invention is that Applicants are not required to disclose and test every oxide containing a metal and pentavalent bismuth in order to be entitled to a generic patent. The invention is not oxides containing a metal and pentavalent bismuth. Rather, like in Ansul, Applicants discovered a new application (batteries) for compounds (oxides containing a metal and pentavalent bismuth) that are well known. The Court addressed this very issue in In re Fuetterer, 138 U.S.P.Q. 217, 223 (1963):

Appellant's invention is the combination claimed and not the discovery that certain inorganic salts have colloid suspending properties....The invention description clearly indicates that any inorganic salt which has such properties is usable in his combination. If others in the future discover what inorganic salts additional to those enumerated do have such properties, it is clear appellant will have no control over them per se, and equally clear his claims should not be so restricted that they can be avoided merely by using some inorganic salt not named by appellant in his disclosure. The only "undue burden" which is apparent to us in the instant case is that which the Patent Office has attempted to place on the appellant.

Amending the claims to cover only the use of oxides containing a metal and pentavalent bismuth that Applicants have named would allow competitors after reviewing the patent to use other oxides containing a metal and pentavalent bismuth in batteries in order to avoid literally falling within the claim while still taking advantage of Applicants' contribution. This result would be unfair to Applicants. The Court of Customs and Patent Appeals, in In re Goffe, 191 U.S.P.Q. 429, 431 (1976), explained why:

For all practical purposes the board would limit appellant to claims involving the specific materials disclosed in the examples, so that a competitor seeking to avoid infringing the claims would merely

have to follow the disclosure in the subsequently-issued patent to find a substitute. However, to provide effective incentive, claims must adequately protect inventors. To demand that the first to disclose shall limit his claims to what he has found will work or to materials which meet the guidelines specified for "preferred" materials in a process such as the one herein involved would not serve the constitutional purpose of promoting progress in the useful arts.

Regarding the quantity of experimentation necessary, a person skilled in the art would have to conduct virtually no experimentation to practice the invention broadly. At least fifty oxides containing a metal and pentavalent bismuth are identified in Applicants' specification.

Moreover, to the extent there is doubt that a particular oxide containing a metal and pentavalent bismuth that is not among those disclosed by Applicants would work in a battery, the specification provides examples that can be used to identify easily those oxides containing a metal and pentavalent bismuth (if any) that do not work in a battery. Cf. In re Wands, 8 U.S.P.Q.2d 1400, 1404-06 (Fed. Cir. 1988) (finding no undue experimentation where specification provided screening test).

The lack of experimentation necessary to practice the invention further brings out why Applicants are entitled to broad protection. The Court in Ansul described how easy it is under these circumstances for others to appropriate an inventor's contribution (169 U.S.P.Q. at 762, quoting district court):

With astonishing rapidity [the infringers] used the new discovery and teachings in routine experiments, featuring routine screening techniques, to develop practical uses for the product. None of this would have occurred, of course, if it had not been for Uniroyal's disclosure of the basic secret with sufficient information for researchers to use the compound in their regular sampling procedures.

Regarding the presence or absence of working examples, Applicants have not only provided a working example, they have provided five working examples.

Courts in analogous situations have found the quantity of testing to be adequate. For example, in In re Boller, 141 U.S.P.Q. 740 (C.C.P.A. 1964), the claimed invention was using volatile neutralizing agents in a chemical process. The patent specification described only a limited number of neutralizing agents that could be used in the process. The court, focusing on the claimed invention rather than on the absence of examples of other neutralizing agents that could be used in the process, held that the claim was broadly enabled:

This is a broad invention and, as noted by the board, appellant is entitled to claims commensurate with the disclosure. Accordingly, we believe that appellant's disclosure, even though of a limited class of "volatile neutralizing agents," is sufficient to justify claims which define broadly a volatile neutralizing agent. Use of this term is commensurate with the breadth of the invention as disclosed. We think any chemist skilled in this art is fully apprised by appellant's disclosure of what the invention is and is taught how to use it. Appellant need not disclose every operative "volatile neutralizing agent."

Id. at 743 (citation omitted).

Regarding the state of the prior art, the Examiner has not rejected the claims any prior art. The invention thus is of pioneer status, and entitled to broad protection. As the court commented in In re Hogan, 194 U.S.P.Q. 527, 537 (C.C.P.A. 1977) (emphasis added):

[W]e note appellants' argument that their invention is of "pioneer" status. The record reflects no citation of prior art disclosing a solid polymer of 4-methyl-1-pentene, which may suggest that appellants at least broke new ground in a broad sense. On remand, appellants may be found to have been in fact the first to conceive and reduce to practice "a solid polymer" as set forth in claim 13. As pioneers,

if such they be, they would deserve broad claims to the broad concept.

Regarding the predictability of the art, the chemical/biochemical arts generally are unpredictable. This also applies to the state of the battery art when Applicants made their invention. Apparently nobody knew that oxides containing a metal and pentavalent bismuth actually would work as a cathode material for batteries until Applicants conducted their research. But now that Applicants have conducted their work, and established the broad applicability of their invention, it is predictable that oxides containing a metal and pentavalent bismuth will work as a cathode material for batteries.

Regarding the breadth of the claims, the claims cover no more than Applicants' contribution – the application of oxides containing a metal and pentavalent bismuth as a cathode material for batteries.

Applying the law to the present facts, Applicants have enabled the claimed invention.

But the Examiner ignores all this, and instead constructs a lack of enablement rejection based on unsupported speculation. The Examiner's approach is captured the following statement:

Specifically, claims 1, 10, 22 & 36 relate to an extremely large number of possible cathodic materials. The claims contain so many options or possible permutations and provisos that a lack of clarity exists, and the specification does not enable the vast options outside the list relayed in claim 2, 12, 16, 27 & 31.

The Examiner makes this statement without citing any references describing the "extremely large number of possible cathodic materials" or the "so many options or possible permutations" of materials. The Examiner implies that she is aware of "extremely large number of possible cathodic materials", but does not cite any support for her statement. This is inappropriate.

Inventors are not required to name every conceivable species in order to be entitled to a generic claim. This was made clear, for example, in the Fuetterer and Goffe decisions, discussed previously. See also Dart Indus., Inc. v. E.I. Du Pont de Nemours & Co., 348 F. Supp. 1338, 1356, 175 U.S.P.Q. 540, 553 (N.D. Ill. 1972), rev'd on other grounds, 489 F.2d 1359, 179 U.S.P.Q. 392 (7th Cir. 1973), cert. denied, 417 U.S. 933, (1974) ("Having described his invention and shown its principle, a patentee is deemed to claim every form in which his invention may be copied.").

It is the duty of the Examiner who rejects a claim for lacking enablement to provide a reasonable support for the rejection, including why she questions any evidence of enablement provided by inventors. As the Court explained in In re Dinh-Nguyen, 181 U.S.P.Q. 46, 47 (C.C.P.A. 1974):

Any assertion by the Patent Office that the enabling disclosure is not commensurate in scope with the protection sought must be supported by evidence or reasoning substantiating the doubts so expressed.

Similarly, in In re Marzocchi, 169 U.S.P.Q. 367, 370 (C.C.P.A. 1971), the court reasoned:

[I]t is incumbent upon the Patent Office, whenever a rejection on this basis [lack of enablement] is made, to explain why it doubts the truth or accuracy of any statement in a supporting disclosure and to back up assertions of its own with acceptable evidence or reasoning which is inconsistent with the contested statement. Otherwise, there would be no need for the applicant to go to the trouble and expense of supporting his presumptively accurate disclosure.

For all of the reasons explained above, the Examiner has not met her burden, and the lack of enablement rejection should be reversed.

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Claims 11-15, 17, 18, 20-30, and 32-41 were provisionally rejected under 35 U.S.C. § 101 as claiming the same invention as that of claims 1-9, 30-39, 60-72, and 92-97 of copending Application No. 10/913,922.

Applicants have amended the present claims and the claims in copending Application No. 10/913,922. Accordingly, this rejection should be withdrawn.

New claims 42-52 are all dependent claims, so they are patentable for at least the same reasons that the independent claims are patentable.

For at least reasons discussed above, Applicants believe the claims are in condition for allowance, which action is requested.

Enclosed is a Petition for Extension of Time, with the fee. Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

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